

## **CLAIMS**

## WHAT IS CLAIMED:

1	1.	A method for reconfiguring a signal path in a computing system including a		
2	plurality of system domains, the method comprising:			
3	detecting a predetermined condition triggering a reconfiguration of the computing system;			
5	recon	figuring a signal path affected by the condition from a first mode to a second		
6		mode responsive to detecting the condition;		
7	leaving the unaffected system domains configured in the first mode; and			
8	opera	operating the affected system domains in the second mode and the unaffected system		
9		domains in the first mode.		
1	2.	The method of claim 1, wherein detecting the failure includes detecting an		
2	interconnect	failure.		
1	3.	The method of claim 1, wherein the computing system includes at least one		
2	system control board and wherein detecting the failure includes detecting the failure from th			
3	system contro			
1	4.	The method of claim 1, wherein detecting the failure includes detecting the		
2	failure from t	he affected system domain.		
1	5.	The method of claim 4, wherein the computing system includes at least one		
2	system contro	ol board and the method further comprises notifying the system control board of		
3		the affected system domain.		
1	6.	The method of claim 1, wherein detecting the failure includes detecting the		
2	failure during	first operations.		
1	7.	The method of claim 1, wherein detecting the failure includes detecting the		
2	failure upon r	eset.		
1	8.	The method of claim 1, wherein configuring the affected system domains		
2	includes:			
3	config	uring a first switch in a first affected domain defining a first end of the affected		

signal path from the first to the second mode;

5

6

3

1

2

6

1

3

7

2

3

6

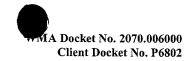
1

2

3

1

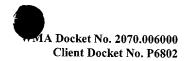
3



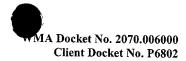
configuring a crossbar switch defining a second end for the affected signal path from the first mode to the second mode. 9. The method of claim 1, wherein the computing system includes a system control board and configuring the affected system domains includes configuring the system domains from the system control board. 10. The method of claim 1, wherein: operating the unaffected system domains in the first mode includes separating a plurality of information in each transaction into two messages and transmitting the two messages in parallel, each on a respective half of the signal paths; and operating the affected system domains in the second mode includes transmitting the messages in series on a single half of the affected signal path. 11. The method of claim 1, wherein: operating the unaffected system domains in the first mode includes separating a plurality of information in each transaction into two messages and transmitting the two messages in parallel in a predetermined number of cycles; and operating the affected system domains in the first mode includes transmitting a plurality of information in each transaction in a single message in twice the predetermined number of cycles. 12. The method of claim 1, further comprising at least one of: defining the system domains: pausing operations after detecting the failure but before reconfiguring the affected system domain; and resetting the computing system after detecting the failure but before reconfiguring the affected system domain. 13. The method of claim 1, wherein dynamically reconfiguring a signal path affected by the condition from a first mode to a second mode includes dynamically reconfiguring the signal path affected condition from a normal mode to a degraded mode. 14. The method of claim 1, wherein dynamically reconfiguring a signal path

affected by the condition from a first mode to a second mode includes dynamically

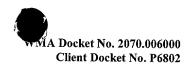
reconfiguring the signal path affected condition from a degraded mode to a normal mode.



1.	15. A method for reconfiguring a signal path in a computing system including a		
2	plurality of system domains, the method consisting essentially of:		
3	detecting a condition triggering a reconfiguration of the computing system; and		
4	reconfiguring a signal path affected by the condition from a first mode to a second		
5	mode responsive to detecting the condition; and		
6	operating the affected system domains in the second mode and the unaffected system		
7	domains in the first mode.		
1	16. A method for reconfiguring a signal path in a computing system including a		
2	plurality of system domains, the method comprising:		
3	detecting a condition triggering a reconfiguration of the computing system; and		
4	reconfiguring a signal path affected by the condition from a first mode to a second		
5	mode responsive to detecting the condition;		
6	operating the affected system domains in the second mode and the unaffected system		
7	domains in the first mode.		
1	17. A computing system, comprising:		
2	a plurality of system domains;		
3	a centerplane interconnecting the system domains;		
- 4	a system controller capable of detecting a condition triggering a reconfiguration and		
5	reconfiguring a signal path affected by the condition from a first mode to a		
6	second mode.		
1	18. The computing system of claim 17, wherein the system domains are		
2	dynamically configured.		
1	19. The computing system of claim 17, wherein each system domain includes:		
2	a system board;		
3	an expansion board; and		
4	an I/O board.		
	20 77		
1	20. The computing system of claim 19, wherein the system board, expansion		
2	board, and I/O board comprise a system board set.		



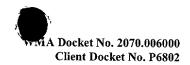
	1	21. The computing system of claim 17, wherein the centerplane comprises a	
	2	plurality of crossbar switches interconnecting the system domains.	
	1	22. The computing system of claim 21, wherein the plurality of crossbar switches	
	2	includes:	
	3	a data crossbar switch;	
	4	an address crossbar switch; and	
	5	a response crossbar switch.	
	1	23. A computing system, comprising:	
	2	a plurality of system domains;	
	3	a plurality of signal paths among the system domains; and	
	4	a system controller capable of condition triggering a reconfiguration and dynamically	
2	5	reconfiguring a signal path affected by the condition from a first mode to a	
	6	second mode.	
	1	24. The computing system of claim 23, wherein the system domains are	
	2	dynamically configured.	
	1	25. The computing system of claim 23, wherein each system domain includes:	
995 Sept.	2	a system board;	
W M	3	an expansion board; and	
The state of the s	- 4	an I/O board.	
	1	26. The computing system of claim 25, wherein the system board, expansion	
	2	board, and I/O board comprise a system board set.	
	1	27. The computing system of claim 23, wherein the centerplane comprises a	
	2	plurality of crossbar switches interconnecting the system domains.	
	1	28. The computing system of claim 27, wherein the plurality of crossbar switches	
	2	includes:	
	3	a data crossbar switch;	
	4	an address crossbar switch; and	
	5	a response crossbar switch.	



1	29. The computing system of claim 23, wherein the plurality of signal paths		
2	includes:		
3	a plurality of data signal paths;		
4	a plurality of address signal paths; and		
5	a plurality of response signal paths.		
I	30. The computing system of claim 23, wherein each signal path comprises:		
2	a first half capable of transmitting a first message containing a first portion of the		
3	information in a given transaction in the normal mode; and		
4	a second half capable of transmitting a second message containing a second portion of		
5	the information in the transaction in the normal mode.		
. 1	31. The computing system of claim 30, wherein both the first and second halves		
2	are capable of transmitting a single message containing both the first and second portions in		
3	the degraded mode.		
1	32. The computing system of claim 23, wherein each signal path terminates at a		
2	first end in a first one of the system domains, routes through a crossbar switch, and terminates		
3	at a second end in a second one of the system domains.		
1	33. The computing system of claim 32, wherein the system domains and the signal		
2	paths are configurable by configuring the first end, the second end, and the crossbar switch.		
1	34. A computing system, comprising:		
2	a system controller;		
3	a plurality of system domains;		
4	at least one crossbar switch interconnecting the system domains;		
5	a plurality of signal paths, each signal path terminating at a first end in a first one of		
6	the system domains, routing through the crossbar switch, and terminating at a		
7	second end in a second one of the system domains; and		
8	a console connection over which the system controller can, responsive to a condition		
9	triggering a reconfiguration, reconfigure a plurality of the system domains		
10	affected by the condition and the crossbar switch to operate the affected signal		
11	paths in a first mode while the signal paths domains unaffected by the failure		
12	operate in a second mode.		

1 2

10



35.	A computing system,	comprising:
-----	---------------------	-------------

a plurality of system boards from which a plurality of system domains can be defined;				
a centerplane including at least one crossbar switch interconnecting the system				
domains to provide a plurality of signal paths among the system boards; and				
a system control board hosting a system controller capable of defining the system				
domains, configuring the system domains and the crossbar switch to operate				
the signal paths in a first mode, and, responsive to a condition triggering a				
reconfiguration, reconfiguring the affected system domains and the crossbar				
switch to operate the affected signal paths in a second mode while the				

unaffected signals paths operate in the first mode.